

## REMARKS

Reconsideration of this application in light of the above amendments and the following remarks is respectfully requested. These remarks will begin with brief discussions of the claimed invention and the amendments being made to the claims and will then address the Office Action following the order of its paragraphs.

### The Claimed Invention:

This invention as now set forth in the amended claims relates to systems and methods for providing continuous reception of one or more video signals from on-board cameras on one or more mobile objects (and as set forth in claims 19 and 20 in particular, race cars) as they move around race tracks. This mobile object-race track aspect of the invention is fully set forth as a preferred embodiment throughout this application. The invention as claimed is characterized by employing a transmitter for the video signal located on the mobile object and plurality of receivers located about the race track for receiving the transmitted signal. A controller, which is not located on the mobile object, selects a receiver from among the plurality of receivers from which to output the received video signal. The claims set forth that this selection of receiver is based upon a position signal indicative of the position of the mobile object as it moves around the race track. The claims specify that this position signal is based on indications other than parameters of the received video signal, for example by location information furnished by a track timing system at the race track. In practice, and as recited in the amended claims, the number of receivers and their locations about the track are selected such that there is reception overlap among adjacent receivers and continuous reception of the transmitted video signal as the race car moves around the race track and the position signal changes and those changes in the position signal cause different receivers to be selected by the controller.

### The Amendments to the Claims:

As just noted, a number of amendments have been made to the claims. The claims are now focused on the preferred embodiment involving the transmission of on-board video camera

signals from mobile objects as they move around race tracks and the serial reception of these signals by a sequence of receivers located at spaced about locations around the race track.

In claim 1, first paragraph, a passage is added to make clear that the claimed invention is directed to "...a system for providing continuous reception of a video signal from an on board camera in a mobile object as it moves around a race track..." Independent method claim 12 as now amended carries this same idea. Newly added claims 19 and 20 depend from claims 1 and 12 respectively and specify the mobile object as the most preferred species, a race car.

In claim 1, second paragraph, the text is rearranged to make clear that the video camera and the transmitter are located on the moving object (race car) and to set forth their respective functions of generating and transmitting the on board camera video signal

In the third paragraph, the words "at least", which are rendered redundant by the addition of "comprising" wording earlier in the claim, are removed for clarity.

In claim 1, fourth paragraph, the function of the position detector to provide a position signal "...indicative of the position of the mobile object as it moves around a race track..." and the idea that this position signal is based upon indications other than the parameters of the received video signal text are spelled out with additional clarity.

In claim 1, fifth paragraph, the text is rearranged to make clear the location of the controller not on the mobile object and the controller's function of selecting and outputting the video signal from a selected receiver based upon the position signal and of changing this selection as the position signal changes.

Claim 2 has been reworded to better track the antecedent and amended "mobile object" wording of claim 1 from which it depends.

Claim 4 has been amended to reinforce the idea that the receivers, which have helical antennas, are arranged about a race track.

Claim 7 has been reworded to emphasize that the system relates to movement of a mobile object around a race track and to the use of signals provided by the timing system at the race track and to eliminate a possible antecedent basis problem in its previous text.

Claim 8 has been reworded to make clear that when multiple objects, such as race cars, are present in the system they each have their own video camera and video transmitter.

An extraneous word has been removed from claim 10.

Claim 11 has been amended to obviate two “lack of antecedent basis” rejections made in the Office Action under reply.

Claim 12, which is directed to a method of communicating a video signal has been amended to correspond more closely in scope to amended claim 1. The function of an on board video camera in the mobile object on a race track is added and the application of the method to the communication of signals from one or more mobile objects to multiple receivers spaced about the race track is spelled out. The determining of the location of the mobile object using indications other than parameters of the received video signal is also spelled out with increased particularity.

Finally, three additional claims, claims 18-20, have been added. Claim 18 depends from claim 1 and spells out the preferred configuration for the communication system of the invention in which there is a sufficient plurality of receivers placed about the race track such that there is overlap area between adjacent receivers and there is never a break in the reception of the transmitted video signal from the mobile object (race car) as it moves completely around the race track. Claims 19 and 20 depend upon claims 1 and 12 respectively and are directed to the most preferred embodiment in which the mobile object moving around the race track is a race car.

The Office Action:

1.- 2. These paragraphs were dealt with in the Amendment filed on 11 May 2006.

3.-6. Claim Rejections -35 U.S.C. §112

Thank you for noting two antecedent basis insufficiencies in Claim 11. These were overlooked in the previous amendment and are corrected herein.

7.-8. Claim Rejections 35 U.S.C. §102

Claims 1, 2, 5, 6 and 8-12 have been again rejected under 35 U.S.C. §102 over Lemelson et al. "...for the same reasons set forth in Section 14 of the last Office Action." This rejection as it might be sought to be made against the newly-amended claims now presented is respectfully traversed.

At the outset, it is important to review the invention as claimed in claims 1 and 12 (the two independent claims now under examination) and to compare this invention with the overall disclosure of Lemelson et al.

Claims 1 and 12, as now amended, relate to a system and a method for providing continuous reception of a video signal generated by an on board video camera on a mobile object such as a race car as it moves around a race track. The video signal is transmitted by a transmitter located in the object to multiple receivers positioned about the race track and a controller selects the signal received by one receiver from among the multiple receivers using a position signal generated by a position detector. This position signal is based on indications other than parameters of the received video signal. All of these features of this invention are specifically recited in amended claims 1 and 12.

Claims 1 and 12 (and claims 2, 5, 6 and 8-11 which depend from claim 1) as previously presented did not specifically recite that the system and method they sought to protect was directed to providing continuous reception of a video signal from an on-board camera mounted on a mobile object as it moves around a race track. These recitations have now been specifically added to claims 1 and 12. These recitations set these claims apart from the disclosure of Lemelson et al as Lemelson et al does not teach or suggest such a system or method.

Lemelson et al does describe a GPS vehicle collision avoidance warning and control system for use in determining the position of host vehicles on highways and aircraft in aircraft landing patterns. The Lemelson et al disclosure is extremely expansive and sets forth a wide range of signals which can be generated on the vehicle or received by the vehicle (see Fig. 2). These signals include GPS signals, radar/lidar signals, ranging computer control signals, speech synthesizer signals and display signals, to name but seven of the many signals there shown. Lemelson et al does mention a TV camera in his Fig. 2 but describes this TV camera in the context of the analysis of the TV signals produced by this camera to detect objects and to generate digital signals indicative of the position and presence of objects (see Lemelson et al's paragraph 0059).

Lemelson et al does not transmit video signals from a mobile object to a series of receivers mounted around a race course. Lemelson et al uses its video cameras to detect objects. (see 0058) This detection information is used to "analyze all objects." (see 0057) This analyzing includes "...processing and analyzing digital signals indicative of video images detected by the one or more television cameras." (see 0059) Lemelson et al describes carrying out this analyzing of these digital signals using neural networks (see 0070) fuzzy logic associative memory( see 0074) and expert system fuzzy logic inference rules to provide additional information (beyond the GPS/DGPS/LPS data which it also employs) to avoid or minimize collisions. (see 0110)

In Lemelson et al, all of this analyzing of the video signal and generation of location information takes place on the vehicle for which collisions are being avoided. This can be seen in Fig. 3 where the microprocessor on board the vehicle is described. Fig. 3 shows that this microprocessor receives the GPS/GPS/LPS information as well as the video camera signal, radar-lidar signals and the like and uses the video signals in an image analysis computer to generate better or more detailed information about the location and velocity of the vehicle upon which the camera and the microprocessor are mounted and the locations of other vehicles and other objects relative to that same vehicle.

The abstract in Lemelson et al specifically notes that this computer processing and analysis and location information generation are taking place “...in the one vehicle...” (that is the vehicle with the camera or cameras.) It is this information about location, etc produced in the computer analysis that is transmitted, not the video signal itself which is only used in the vehicle where it was generated to determine position. Lemelson et al further emphasizes this when it states “Each of the individual vehicles 2 computes its own precise location, velocity and X-Y-Z acceleration vectors, which are then transmitted via radio control signal 8 to control center 12...” (see 0102) Fig 5 in Lemelson et al is consistent with this when it shows camera 54 and display 110 are on the same vehicle and that they are connected to the computer “bus 112”. Additional disclosure in Lemelson et al consistent with this interpretation can be found in paragraphs 88, 99, 102, 103, 115 and 119 and following.

Applicants’ attorney can find no disclosure in Lemelson et al, and particularly in Lemelson et al’s Figs 1-5 and 19 which suggests or teaches that the video signals produced by its cameras 54 on the vehicle 2 are ever transmitted as video signals from the vehicle as is required in the present claims. Instead, Lemelson et al discloses processing the video signals from camera 54 on vehicle 2, using a processor located in the vehicle 2 into vehicle position information. It is this vehicle position identification information that Lemelson et al discloses can be transmitted from the vehicle 2 by radio communication.

In addition, although Lemelson et al does show multiple receiver towers in its Fig. 1, it does not describe how to select between the same video signal received at different receivers placed around a race track, as is set forth in the present claims.

It is respectfully submitted that there are two possible ways to interpret Lemelson et al. One is to consider that Lemelson et al is limited to what it says it is limited to - a GPS vehicle collision avoidance system. If this is done the present invention falls outside of the Lemelson et al disclosure since, under that interpretation, Lemelson et al does not describe providing a continuous video signal from a mobile object such as a race car as that object proceeds around a race track as called for in claims 1 and 12, and all of the remaining claims which depend from them.

Alternatively, one can interpret Lemelson et al expansively and consider all of the multitude of permutations and combinations possible within its broad disclosure. In this case, the broad disclosure of Lemelson et al is that of a genus and the specific invention sought to be covered by applicants in the present application is a "species" included within that "genus". It is settled that a species included within a genus can be separately patentable over a reference setting forth the overall genus when the species is not specifically recited in the reference and when the reference does not teach or suggest how to pick and choose among the numerous elements in the genus it recites to come up with species sought to be claimed. It is respectfully submitted that, in the present case, while the Lemelson et al genus does disclose a wide range of sensors and receivers (including a TV camera) on a vehicle and describes that this vehicle can be moving and that when this vehicle is moving wide ranges of signal transmissions, receptions and processings are possible, there is no teaching in Lemelson et al to select out of these generic disclosures the species that is now claimed.

It is further submitted that to only way one of skill in the art could come up with a suggestion of the present invention out of the Lemelson et al published patent application is if that skilled person had applicants' present patent application before him or her as a guide. Without resort to the present specification, one could not select and assemble the various elements of the systems and methods now claimed herein in claims 1 and 12. One would also have no indication of the advantageous and effective signal transmission that this system and method would provide as compared to the helicopter-based television video signal transmission systems employed at race tracks heretofore.

15.-18. Claim Rejections 35 U.S.C. § 103

The Examiner is correct in presuming that the subject matter of the various claims in this application was commonly owned at the time their inventions were made.

The rejection of claims 3 and 4 as obvious in view of Lemelson et al in view of the Examiner's "Official Notice" is respectfully traversed. Claims 3 and 4 recite a preferred geometry for the antenna employed in the several receivers which receive the transmitted video

signals from the mobile object. These claims both depend from and delimit claim 1 which has been shown to be patentable over Lemelson et al. The Examiner's Official Notice does not go to correct the deficiencies of Lemelson et al noted above but rather appears to be limited to his beliefs concerning antenna geometry and placement. Accordingly, it is respectfully submitted that this rejection should be reconsidered and withdrawn.

This rejection continues to be based upon the combination of Lemelson et al plus Examiner's personal knowledge. Applicants' attorney again requests that an appropriate record be created for purposes of appeal. That is, the Examiner is specifically requested to file a suitable affidavit or declaration setting forth the basis for his personal knowledge. In the Office Action under reply the Examiner can only point to a passage in the present application as the basis for the allegation that this height is well known. One can not use applicants' teachings of how to practice their invention as a basis to reject claims to that invention.

The rejection of claim 7 as obvious over Lemelson et al in view of Jones et al is also respectfully traversed. Claim 7 calls for the position detector to use information derived from the timing system at a race track. Applicants' attorney agrees with the Examiner that Jones et al which appears to disclose a classic "transponder" system for determining the presence of a race car at one or more locations around a race track, would be capable of generating position information useful in the system of claim 7.

More importantly again, however, claim 7 depends from claim 1 which has been shown to be patentable. Jones et al does not address the failings of Lemelson et al to disclose or suggest the invention of claim 1 and thus, together with Lemelson et al can not render obvious claim 7.

Please reconsider this rejection and withdraw it.

Applicants respectfully submit that this application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.



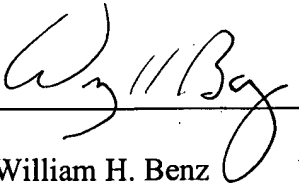
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-0872.

Respectfully submitted,

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By

A handwritten signature in black ink, appearing to read "W. H. Benz", is written over a horizontal line.

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